REMARKS

Claims 1-26 remain pending in the present application. Claims 15-26 stand withdrawn from consideration due to the restriction requirement previously issued by the Examiner.

Rejections under 35 U.S.C. §112

Claims 1-14 stand rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. Applicants traverse this basis for rejection and respectfully request reconsideration and withdrawal thereof.

The Examiner argues that the written description in the specification does not support the concept that the claimed polymer adhesive can be made of block, random and/or alternating copolymers, and therefore deems amended claim 1 to contain new matter. The Examiner prefers to read the definition of "polymer" at page 6, lines 22-28 independently of the term "polymer adhesive" throughout the present application.

> Said passage does not in any way suggest the polymer *adhesive consists* of one or more block, random, or alternating *ethylene copolymers.* Thus the examiner finds said passage inadequate support for the concept of the invention as presently claimed. (Office Action of March 9, 2006, emphasis in original).

As such, it appears that the Examiner does not consider the polymer adhesives of the present invention to fall within the definition of "polymer". Applicants submit that the Examiner's position is disingenuous, at best.

> The PTO has done nothing more than to argue lack of literal support, which is not enough. If lack of literal support alone were enough to support a rejection under § 112, then the statement of In re Lukach, supra, 58 CCPA at 1235, 442 F.2d at 969, 169 USPQ at 796, that "the invention claimed does not have to be described in ipsis verbis in order to satisfy the description requirement of § 112," is empty verbiage. The burden of showing that the claimed invention is not described in the specification rests on the PTO in the first instance, and it is up to the PTO to give reasons why a description not in ipsis verbis is insufficient. In re Wertheim, 541 F.2d 257, 265, 191 U.S.P.Q. 90, 98 (CCPA 1976).

Throughout the present application, the polymer adhesives are described in terms consistent with the definition of "polymer" at page 6, e.g. comprising ethylene copolymers and terpolymers:

> The polymer adhesive consists of at least 85% by weight of one or more ethylene copolymers...(page 4, lines 19-20);
>
> More preferably, the polymer adhesive is a terpolymer containing 50-90 weight % ethylene...(page 4, lines 30-31);
>
> The thermoplastic polymer adhesive used to bind the fibers of the tufts of the carpet of the invention is a resin from the group of ethylene copolymers and terpolymers...(page 12, lines 9-11);
>
> The ethylene copolymer or terpolymer polymer adhesives of the invention are formulated to adhere well to...(page 13, lines 30-31).

In fact, it is difficult to find an instance in the present specification where the term "polymer" is not associated with the term "adhesive"; nor an instance where the terms "copolymer" and "terpolymer" are associated with anything other than the disclosed polymer adhesives.

Accordingly, at the time the present application was filed, it would have been clear to the skilled artisan that the definition of "polymer" as set forth at page 6 of the present specification was intended to be applicable to the "polymer adhesives" so thoroughly described in the specification, and that the Applicants were in possession of the invention as claimed.

Applicants' decision to exclude grafted copolymers from the claims is no more than a permissible narrowing of the claim scope.

Withdrawal of the rejection is requested.

Rejection under 35 U.S.C. §102(e)/103(a)

Claims 1, 2, 6-10, and 14 stand rejected under 35 U.S.C. §102(e) as anticipated by or obvious over US 2005/0147787 to Bailey et al. Applicants traverse this basis for rejection and respectfully request reconsideration and withdrawal thereof.

Bailey et al. disclose a tufted carpet having good tuft bind and fuzz resistance comprising pile face yarns, a backing fabric and an adhesive binder free of inorganic

and latex materials. The adhesive binder comprises a thermoplastic fabric, which melts to secure the pile to the backing (Abstract). The adhesive binder can be an ethylene methyl acrylate copolymer (paragraph 0027), and is advantageously spun into a nonwoven fabric, such as a spunbond, meltblown, or needlepunched fabric, which can be handled as is without the need for any further mechanical consolidation (paragraph 0032). In one exemplified embodiment, the adhesive fabric is made from an ethylene methyl acrylate copolymer (EMAC) designated as "Chevron SP 2220" (paragraph 0045). Bailey et al. fail to disclose or suggest the comonomer ratios, melt index, or tenacity of the EMAC adhesive.

At page 4 of the outstanding Office Action, the Examiner recognizes the shortcomings of Bailey et al., and directs attention to two other patents which teach that Chevron SP 2220 has a methyl acrylate content of 20 wt%, and concludes that Chevron SP 2220 would inherently meet the present claim limitations of melt index (greater than 150, per ASTM D-1238), and tenacity. The Examiner states:

> it is reasonable to presume that said limitations are inherent to the invention. Support for said presumption is found in the use of similar materials (i.e., polymer adhesive of ethylene copolymers) used to produce the carpet. Like materials cannot have mutually exclusive properties. The burden is upon applicant to prove otherwise. In re Fitzgerald, 205 USPQ 495. (Office Action, page 4).

Applicants respectfully submit that the Examiner's presumption is not reasonable, and is in fact incorrect. Applicants' claims clearly specify that the melt index of the polymer adhesive must be greater than 150. Those of skill in the art are well-aware that a polymer's melt index is indicative of its molecular weight. In fact, Applicants provide a discussion of the significance of the melt index of the polymer adhesive in the present specification.

> The polymer adhesive needs to have an extrusion viscosity and an affinity for the carpet fibers that enable it to contact and wet a substantial majority of the fibers in the tufts. The viscosity of the molten adhesive is controlled through the polymerization process used to produce the adhesive and by adjusting the temperature at which the adhesive is extruded during the carpet making process. A less viscous polymer adhesive, having a higher melt index, can be obtained by slowing the polymerization process, by increasing the amount of polymer chain initiators used during the polymerization,

> and/or by reducing the polymerization time so as to decrease the length of the polymer chains and hence decrease the average molecular weight of the polymer adhesive. (Specification, page 11, line 24, bridging to page 12; emphasis added).

Here, Applicants make clear the relationship between melt index and molecular weight, i.e. a higher melt index means a lower molecular weight polymer.

The Examiner proposes that merely because the prior art EMAC has a monomer content within the scope of that set forth in present claim 1, that the melt index (and therefore the molecular weight) would be inherently the same as that in claim 1. However, from the recitation above, it is clear that molecular weight/melt index is determined by completely different factors, and is not related to comonomer content. Accordingly, the Examiner's stated presumption as to the inherency of the prior art melt index, based upon the comonomer content being similar to that of the presently claimed polymer adhesive, is not a reasonable one. Those of skill in the art would recognize that the prior art EMAC might have a melt index (molecular weight) completely outside the range of the present claims. It is a well-settled tenet of the patent law that inherency must be certain, not merely likely or probable.

> The fact that a certain result or characteristic may [optimally] occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. In re Rijckaert, 9 F.3d 1531, 1534; 28 USPQ2d 1955, 1957 (Fed. Cir. 1993); In re Oelrich, 666 F.2d 578, 581-82, 212 USPQ 323, 326 (CCPA 1981). In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art. Ex parte Levy, 17 USPQ2d 1461, 1464 (BPAI 1990) (emphasis in original). **MPEP 2112.**

It seems clear that the melt index of the Bailey et al. EMAC adhesive could just as likely fall outside the present claims as inside. This is insufficient to establish inherency.

In further support, Applicants submit herewith a printout of a Product Data Sheet for EMAC SP 2220 (Eastman/Voridian), which describes the ethylene methyl acrylate polymer as having a methyl acrylate content of 20.0%, and a melt index of 20.0 g/10 min according to ASTM D-1238. Applicants believe that this is the same polymer described as Chevron SP 2220 in Bailey et al. However, even if it is not, the

Product Data Sheet establishes that an EMAC polymer having 20.0% methyl acrylate does not necessarily have a melt index above 150, as claimed herein. Clearly, the Examiner's presumption is wrong.

Withdrawal of the rejection is requested.

Rejection under 35 U.S.C. §103(a)
over Bailey et al.

Claims 3-5 stand rejected under 35 U.S.C. §103(a) as obvious over Bailey et al. Applicants traverse this basis for rejection and respectfully request reconsideration and withdrawal thereof.

Applicants reiterate their discussion from above regarding the impropriety of the rejection of independent claim 1 over Bailey et al. Dependent claims 3-5 specify particular copolymers that must be present in the polymer adhesive of claim 1, none of which is disclosed by Bailey et al.

Bailey et al. is no more properly used as prior art against claims 3-5 (which must be read to include the limitations of claim 1), than it is against claim 1. Withdrawal of the rejection is requested.

Rejection under 35 U.S.C. §103(a)
over Bailey et al. in view of Higgens

Claims 11 and 12 stand rejected under 35 U.S.C. §103(a) as obvious over of Bailey et al., in view of Higgens (US 4,522,857). Applicants traverse this basis for rejection and respectfully request reconsideration and withdrawal thereof.

Applicants reiterate the distinctions over Bailey et al., set forth above.

Higgens discloses carpet tile with stabilizing material embedded in an adhesive layer, wherein the stabilizing material can be a woven or nonwoven glass scrim (col. 1, lines 52-55). However, Higgens fails to disclose or suggest modifications to a copolymer adhesive that would cure the deficiencies of Bailey et al., and therefore cannot be said to present a *prima facie* case of obviousness as to the present claims, even in combination with Bailey et al. Withdrawal of the rejection is requested.

Rejection under 35 U.S.C. §103(a)

over Bailey et al. in view of Campbell et al.

Claim 13 stands rejected under 35 U.S.C. §103(a) as obvious over Bailey et al., in view of Campbell et al. (US 3,867,188). Applicants traverse this basis for rejection and respectfully request reconsideration and withdrawal thereof.

Applicants reiterate the distinctions over Bailey et al., set forth above.

Campbell et al. discloses a spunbond nonwoven fabric having silicone-glycol copolymer thereon, used as a carpet backing (Abstract). However, Campbell et al. fail to disclose or suggest modifications to a copolymer adhesive that would cure the deficiencies of Bailey et al., and therefore cannot be said to present a *prima facie* case of obviousness as to the present claims, even in combination with Bailey et al.

Withdrawal of the rejection is requested.

In view of the foregoing, allowance of the above-referenced application is respectfully requested.

Respectfully submitted,

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Dated: 6/6/06

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Enclosure: EMAC SP 2220 Specialty Copolymer (Eastman)

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Automotive

EMAC SP2220 Specialty Copolymer

Applications/Uses
- Films

Product Description

EMAC resins adhere to and are compatible with a wide range of materials i polyolefins, oriented polyolefins, polyesters, ionomers, PVdC, unplasticized PVC polymers. For use as heat seal layer, adhesive layer, or modifier for cc enhancement. They are soft, pliable and tough at ambient and freezing temperat excellent ESCR. These polymers exhibit high solids fillability and compatibility wit of polymers. This facilitates their uses as bases for all-purpose concentrates for ad spectrum of polymers. They process like LDPE.

Additional Product Information
- Product-Technical Data Sheet

When accessing MSDS documents, please note that certain data fields will be generic a not reflect the information relevant to the recipient and/or the material/package size not limited to the manufacturer/supplier address).

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Regulatory Information
- MSDS (USA-English)
- MSDS (All Regions)

Literature
- PE-6 Material Selector Guide - EMAC, EMAC+,EBAC, and EBAC+ Copolymers
- PE-15 VORIDIAN EMAC+ - Ethylene Methyl Acrylate Copolymer "Plus"
- PE-16 VORIDIAN EMAC - Ethylene Methyl Acrylate Copolymers
- PE-17 VORIDIAN EMAC
- PE-18 VORIDIAN EMAC - Ethylene Methyl Acrylate Copolymers
- PE-19 VORIDIAN EMAC - Ethylene Methyl Acrylate Copolymers
- PE-20 VORIDIAN EMAC - Ethylene Methyl Acrylate Copolymers
- PPM-1 EASTMAN Speciality Plastics for Use In Healthcare Products and Packa

EASTMAN

Product Data Sheet

EMAC SP2220 Specialty Copolymer

Application/Uses

- Films

Product Description

EMAC resins adhere to and are compatible with a wide range of materials including paper, polyolefins, oriented polyolefins, polyesters, ionomers, PVdC, unplasticized PVC and other polar polymers. For use as heat seal layer, adhesive layer, or modifier for cost/performance enhancement. They are soft, pliable and tough at ambient and freezing temperatures and exhibit excellent ESCR. These polymers exhibit high solids fillability and compatibility with a wide range of polymers. This facilitates their uses as bases for all-purpose concentrates for addition to a wide spectrum of polymers. They process like LDPE.

Typical Properties (Preliminary)

Property[a]	Test[b] Method	Typical Value, Units[c]
Melt Index (Condition 190°C/2.16 kg)	D 1238	20.0 g/10 min
Density	D 1505	941 kg/m^3 (0.941 g/cm^3)
Vicat Softening Temperature	D 1525	47°C (117°F)
Methyl Acrylate Content		20.0%
Melting Point by DSC	D 3418	82°C (180°F)
Brittleness Temperature	D 746	<-42°C (<-44°F)
Durometer Hardness Shore D Scale	D 2240	36
Tensile Stress @ Break 500 mm/min (20 in./min)	D 638 Type IV Specimen	7 MPa (1000 psi)
Elongation @ Break 500 mm/min (20 in./min)	D 638 Type IV Specimen	675%

[a] *Unless noted otherwise, all tests are run at 23°C (73°F) and 50% relative humidity.*

[b] *Unless noted otherwise, the test method is ASTM.*

[c] *Units are in SI or US customary units.*

Applications

EMAC resins adhere to and are compatible with a wide range of materials including paper, polyolefins, oriented polyolefins, polyesters, ionomers, PVdC, unplasticized PVC and other polar polymers. For use as heat seal layer, adhesive layer, or modifier for cost/performance enhancement. They are soft, pliable and tough at ambient and freezing temperatures and exhibit excellent ESCR. These polymers exhibit high solids fillability and compatibility with a

wide range of polymers. This facilitates their uses as bases for all-purpose concentrates for addition to a wide spectrum of polymers. They process like LDPE.

Comments
Properties reported here are based on limited testing. Voridian makes no representation that the material in any particular shipment will conform exactly to the values given.

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